



The **Sensor Trainer Board** offer Complete training opportunity for most commonly used Sensor available for experimenting in the Laboratory. Due to the typical Strength obtain from a sensor is not enough to process the signal; this board provides signal conditioners with Digital panel meter for display.

Specifications

Display Meter

- On-board Digital Panel Meter provided
- Measuring range of +/-1V
- Input available on 2mm Banana sockets

RPM Meter

- Digital RPM Meter
- Input available on 2mm Banana sockets

LVDT Transducer

- LVDT Transducer with transparent enclosure.
- Displacement of+ Smm
- Primary Excitation voltage of Sine wave 1V p-p.
- Signal Conditioning Amplifier
- LVDT transparent With Screw Gauge unit

Strain/Load Cell Transducer

- Resistive Load cell is used.
- Load/Strain in weights can be measured up to 3 KGs.
- Primary Excitation voltage of 12V DC
- Signal Conditioning Amplifier
- Cantilever Load Cell platform Unit for Strain & Load Cell Setup
- Weight unit up to 3Kgs

Temperature Sensor

- K-type Thermocouple is used.
- PT-100 Type RTD sensor is used
- LM335 Sensor.
- Thermistor Sensor

Signal Conditioning Amplifier

- Heater, Thermometer, Transparent Jar unit for Temperature setup

Speed Sensor

- Proximity Switch is used for Magnetic Pick-up.
- Opto-coupler is used for Photo Pickup

- DC Motor with Proximity Switch for Speed Measurement Setup

Smoke Sensor

- MQ2 Smoke Sensor.
- Buzzer for Alarm

Signal Conditioning & Amplifier

- Instrumentation amplifier
- All interconnections are made using 2mm socket.
- Test points are provided to analyze signals at various points.
- All ICS are mounted on IC Sockets.
- Bare board Tested Glass Epoxy SMOBC PCB is used.
- In-Built Power Supply of +5V, +12V.
- Attractive Metal Enclosure
- User Manual for Experiments.



The **Digital Sensor Workstation** consisting of instrument panel and working table suitable for students to learn and perform various experiments related digital sensors. Single phase 230V, 50 Hz input supply sockets are provided on the unit.

Technical Specifications

Power Supply Unit

- 230V/50Hz AC Socket.
- One Pilot Lamp to indicate Power input.
- Two different output connections
- Potentiometer to vary the supply
- DPM to display the output voltage
- Power distribution of 24V/10A DC Output

DC Motor Unit

- 1 no. motor Speed control Pot P1
- 1 no. of 24 V DC motor.
- One Pilot Lamp

Counter Unit

- 230V/50Hz AC Socket
- Seven segment display to display the event count.

Sensors

- 1 No. Inductive Proximity Sensor (M12)
- 1 No. Inductive Proximity Sensor (M18)
- 1 No. Fiber Optic Sensor with digital display & teach mode
- 1 No. Diffusion Sensor PNP Type (M18)

Note: Specifications are subject to change.

- 1 No. Through Beam Sensor PNP Type (M18)
- 1 No. Reflect Sensor PNP Type (M18)
- 1 No. Capacitive Proximity Sensor

Work Surface and Sensing Unit

- Sensing unit can be easily slide in T slots of aluminium extrusions metal scale
- Work surface have the minimum dimension of 750mm x 500mm.
- Work surface is made up of aluminium extursions (anodized) on which various sensors can be easily mounted.

Aluminum profile Plate of 750mm x 550mm

Accessories

- Working Table (KWT-01) – 1 No.
- Dial Vernier (Make: Mitutoyo) – 1 No.
- Digital Multimeter – 1 No.
- Measuring Metal Scale
- Set of 2mm patch cord
- Series of measuring wafers (sensing elements) are provided.
- User's Manual

On Site Requirements:

- Single Phase 230V @ 50Hz Power Supply.

Experiment list

- To study the basic of digital input & Output
- To study the basic function of digital Sensors
- To study the industrial application of digital Sensors
- To study and calibrate the digital sensor output
- To display & understand the variation in response time of various digital sensor
- To study electrical connections of various types of digital sensors
- To make output connections from various digital sensors.
- To study event counter using DC Motor & Inductive Proximity Sensor

Note: Specifications are subject to change.

